

CLAIMS

1. A block copolymer composition which is a block
copolymer composition comprising, as monomer units, from
55 to 95 mass% of a vinyl aromatic hydrocarbon and from 5
5 to 45 mass% of a conjugated diene, characterized in that
it contains the following components A and B in a blend
ratio within a range of component A/component B = 20 to
80/80 to 20 (mass ratio):

Component A is a block copolymer

- 10 (1) which comprises, as monomer units, from 55 to 95
mass% of a vinyl aromatic hydrocarbon and from 5 to 45
mass% of a conjugated diene,
(2) which is constituted by a hard segment block made
mainly of the vinyl aromatic hydrocarbon and a soft
15 segment block made mainly of the conjugated diene,
(3) wherein the hard segment block comprises blocks S1
and S2 made mainly of a vinyl aromatic hydrocarbon having
two types of different molecular weights, and when the
number average molecular weights of S1 and S2 are
20 represented by M1 and M2, respectively, M1 is within a
range of from 75,000 to 170,000 and M2 is within a range
of from 14,000 to 30,000, and their ratio M1/M2 is within
a range of from 4 to 9, and the ratio of S1 to S2 is
within a range of S1/S2 = 6 to 35/65 to 94 (molar ratio),
25 and
(4) which is produced by a coupling reaction; and
component B is a block copolymer

(1) which comprises, as monomer units, from 55 to 95 mass% of a vinyl aromatic hydrocarbon and from 5 to 45 mass% of a conjugated diene,

(2) which is constituted by a hard segment block made
5 mainly of the vinyl aromatic hydrocarbon and a soft segment block made mainly of the conjugated diene,

(3) wherein the hard segment block comprises blocks S3 and S4 made mainly of a vinyl aromatic hydrocarbon having two types of different molecular weights, and when the
10 number average molecular weights of S3 and S4 are represented by M3 and M4, respectively, M3 is within a range of from 80,000 to 160,000 and M4 is within a range of from 4,000 to 12,000 and their ratio M3/M4 is within a range of from 13 to 22, and the ratio of S3 to S4 is
15 within a range of S3/S4 = 5 to 30/70 to 95 (molar ratio), and

(4) which is produced by a coupling reaction.

2. The block copolymer composition according to Claim 1, wherein component A is a mixture of three types of block
20 copolymers as identified in the following (1), and component (B) is a mixture of three types of block copolymers as identified in the following (2):

S1-B1, S2-B1, (S1-B1)_i-X-(B1-S2)_m (1)

(wherein each of S1 and S2 represents a hard segment
25 block made mainly of a vinyl aromatic hydrocarbon, B1 represents a soft segment block made mainly of a conjugated diene, the number average molecular weight of

B1 is within a range of from 10,000 to 30,000, X is a residual group of a coupling agent, each of i and m is an integer of 0 or more, and i+m is at least 1 and at most 8);

5 S3-B2, S4-B2, (S3-B2)_n-Y-(B2-S4)_o (2)

(wherein each of S3 and S4 is a hard segment block made mainly of a vinyl aromatic hydrocarbon, B2 represents a soft segment block made mainly of a conjugated diene, the number average molecular weight of B2 is within a range
10 of from 9,000 to 20,000, Y is a residual group of a coupling agent, each of n and o is an integer of 0 or more, and n+o is at least 1 and at most 8).

3. The block copolymer composition according to Claim 1 or 2, wherein components A and B are block copolymers
15 obtained by coupling by means of an epoxidized oil.

4. The block copolymer composition according to Claim 3, wherein the epoxidized oil is epoxidized soybean oil.

5. The block copolymer composition according to Claim 3 or 4, characterized in that the ratio of the molar amount
20 of residual groups of ring opened epoxy groups present in the epoxidized oil residual groups in the block copolymer composition comprising components A and B is less than 0.7 to the molar amount of the total of epoxy groups and said residual groups of ring opened epoxy groups, present
25 in the epoxidized oil residual groups.

6. The block copolymer composition according to any one of Claims 1 to 5, wherein components A and B are mixed in

a solution state.

7. A thermoplastic resin composition comprising the block copolymer composition as defined in any one of Claims 1 to 6 and another thermoplastic resin.

- 5 8. A molded product made of the block copolymer composition as defined in any one of Claims 1 to 6, or the thermoplastic resin composition as defined in Claim 7.